

comprising:

a camera for receiving image information;
optics connected to said camera for passing said image information to the camera;
at least one memory unit for storing said image information; and
an output coupled to said data processing unit for outputting image information from said memory unit to the processing unit;

and wherein at least a portion of said camera unit is located within said housing, and

said data processing unit processes image information output by said camera unit, and

wherein said device further comprises means for transmitting image information processed by said processing unit to another location using a radio frequency channel.

4. A device according to Claim 1, wherein said means for transmitting image information comprises a cellular mobile phone unit.

5. (Twice Amended) A device according to Claim 2, wherein the cellular mobile phone unit comprises equipment required by speech communications, such as a microphone and a loudspeaker, wherein said equipment is fitted in the housing of the device.

6. A device for personal communication, data collection and data processing, which is a small-sized, portable and hand-held work station including a housing and comprising a data processing unit; a display; a user interface; a number of peripheral device interfaces; at least one memory unit; a power source; and an application software, wherein the device also comprises:
a camera unit for obtaining and outputting image information, said

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camera unit comprising:

- a camera;
- optics connected to said camera;
- at least one memory unit;
- an output coupled to said data processing unit such that said data processing unit processes image information output by said camera unit; at least a portion of said camera unit being located within said housing; and

wherein said device further comprises:

- means for transmitting image information processed by said processing unit to another location using a radio frequency channel; and
- a replaceable keyboard and a digitizer pad which are both adapted to couple to a same physical and electrical interface to the device.

7. A device according to Claim 1, further comprising an infrared link for data transmission between external devices and the device.

8. A circuit card, which can be fitted to a card slot of a device for personal communication, data collection and data processing, comprising a camera unit having at least a portion thereof integrated in the circuit card, said camera unit for obtaining and outputting image information, said camera unit comprising:

- a camera with optics connected thereto,
- an image processing unit for processing and outputting image information obtained by said camera for use with said device, and
- an output for coupling image information, processed and output by said image processing unit for use with said device, to means in said device for processing image information output

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by said camera unit and means for transmission to another location using a radio frequency channel.

9. A portable radiotelephone comprising:

a solid-state camera unit for receiving image information, a display for presenting image information received by the camera unit to a user,

a microprocessor adapted to control the operations of the camera unit and to process image information received by the camera unit, and

means for transmitting image information processed by said microprocessor from said radiotelephone to another location using a radio frequency channel, and

wherein the camera unit comprises:

a camera, and

means for processing and for storing at least a portion of the image information received by the camera unit for later recall and processing.

10. A device according to Claim 1, wherein the power source is a battery.

11. A device according to Claim 1, wherein the camera is a semiconductor camera.

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~~12~~. (Twice Amended) A device according to claim 1, wherein said camera unit further comprises means for processing image information from an image received by said camera and means for storing at least a portion of the processed image information in said at least one memory unit of said camera unit for later recall.

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~~13~~. (Twice Amended) A circuit card according to Claim ²⁵~~8~~, wherein the camera is a semiconductor camera.

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~~14~~. (Twice Amended) A circuit card according to Claim ²⁵~~8~~,
wherein the circuit card is a PCMCIA card, and wherein the card
slot is a PCMCIA card slot.

15. A device for personal communication, data collecting and data processing, which is a small-sized, portable and hand-held work station comprising a data processing unit; a display; a user interface; a number of peripheral device interfaces; at least one memory unit; a power source; a card slot; and application software, wherein the device also comprises:

a circuit card electrically couplable to said card slot;
a camera unit for obtaining image information, including a camera, optics, and an output, and with at least a portion of the camera unit integrated in said circuit card that is electrically couplable to the card slot of the device, and wherein said data processing unit is coupled to said output for processing image information output by said camera unit while said circuit card is electrically coupled to said card slot of said device, and
means for transmitting image information processed by said data processing unit from said device to another location using a radio frequency channel.

16. A device according to Claim 15, wherein the camera is a semiconductor camera.

17. A device according to Claim 15, wherein the circuit card is a PCMCIA card, and wherein the card slot is a PCMCIA card slot.

18. A device according to claim 4, wherein the cellular mobile phone unit is for transmitting at least one of data and speech.

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19. A portable notebook computer having a housing, comprising:

a camera unit for recording an image of a selected object, and having at least one memory unit for storing an image recorded by said camera unit;

means, coupled to said camera unit, for processing an image recorded by said camera unit, and

means for transmitting an image processed by said processing means to another location using a radio frequency channel;

wherein at least a portion of said camera unit is integrated in one of said housing of said notebook computer and a circuit card.

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19, 20. (Amended) A portable notebook computer according to claim 19, wherein said camera unit further comprises means for performing character recognition of characters appearing in an image recorded by said camera unit.

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19, 21. (Amended) A portable notebook computer according to claim 19, further comprising means, coupled to said processing means, for displaying at least a portion of an image recorded by said camera unit.

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19, 22. (Amended) A portable notebook computer according to claim 19, wherein said transmitting means comprises means for transmitting a facsimile transmission of at least a portion of an image processed by said processing means.

23. A portable notebook computer according to claim 19, further comprising:

means, coupled to said processing means, for receiving a facsimile from a transmitting station.

24. A portable notebook computer having a housing,

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comprising:

a camera unit for recording an image of a selected object, and having at least one memory unit for storing an image recorded by said camera unit;
means, coupled to said camera unit, for processing an image recorded by said camera unit; and
means for transmitting an image processed by said processing means to another location using a radio frequency channel; wherein at least a portion of said camera unit is integrated in one of said housing of said notebook computer and a circuit card; and

further comprising a digitizer pad that is removably coupled to said processing means such that it can be replaced with another type of manual input device.

25. A portable notebook computer according to claim 19, further comprising means for performing at least one of transmitting an electronic mail message, paging, and connecting to an on-line information service.

26. A portable notebook computer according to claim 19, wherein the circuit card is a PCMCIA card.

27. A portable notebook computer according to claim 19, wherein said transmitting means comprises means for transmitting a Short Message Service (SMS) message including at least a portion of an image processed by said processing means.

28. A method for recording and processing an image of a selected object using a portable notebook computer, the notebook computer having a data processing unit, a facsimile transmitting unit, a housing, and a card slot, comprising the steps of:

integrating a camera unit that is electrically coupled to the

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data processing unit, in one of said housing of the notebook computer and a circuit card that is fitted into said card slot of the notebook computer,
operating the camera unit to record an image of the selected object; and
storing and processing the image recorded by the camera unit to perform character recognition of characters appearing in at least a portion of the recorded image; and
using the facsimile transmitting unit to transmit a facsimile representation of at least a portion of the recorded image to another location using a radio frequency channel.

29. A portable computer device, comprising:
a data processor coupled to a memory;
an electronic camera unit that is detachably coupled to the data processor through a plug-in interface, said electronic camera unit comprising a solid state camera, a second data processor and a second memory, said second data processor being operable for performing at least a character recognition task on an image obtained by said solid state camera unit to generate a set of recognized characters; and
a radio transceiver unit coupled to said data processor for transmitting data to a remote receiver through a radio frequency channel, said transmitted data comprising at least one of processed image data obtained from said electronic camera unit or at least a portion of said set of recognized characters.

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~~29~~ 30. (Amended) A portable computer device according to claim
29, further comprising a display for displaying at least a portion
of an image recorded by said electronic camera unit, and wherein
said data processor is responsive to a program stored in said
memory and to a user input for selectively modifying a displayed

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55 ⁵⁷31. (Amended) A portable computer device according to claim 29, further comprising a manual user input interface adapted to be physically and electrically coupled to and decoupled from one of at least two types of user input device[s], wherein a first type of user input device is comprised of a keyboard, and wherein a second type of user input device is comprised of a digitizer pad.

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32. (Amended) A portable computer device according to claim 31, further comprising a display for displaying information to a user, and wherein said manual user input interface is rotatably attached to a housing of said portable computer device such that said user input device that is coupled to said computer device can be rotated so as cover said display.

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33. (Amended) A device for personal communication, data collection and processing, comprising:

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- a small-sized, portable and hand-held work station;
 - a housing for said work station;
 - a data processing unit;
 - a display;
 - a user interface;
 - a number of peripheral device interfaces;
 - at least one memory unit;
 - a power source; and
 - application software;

and further comprising:

- means, coupled to said data processing unit, for transmitting image information processed by said data processing unit to another location using a radio frequency channel; and
- a camera card for obtaining image information, comprising:
 - optics integrated in said camera card for obtaining said

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image information;
at least one memory unit;
a processor unit for processing said image information;
and

an image sensor for obtaining said image information;
and wherein said camera card is at least partially inserted in the device.

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34 (Amended) A device according to claim *61* ~~33~~, further comprising a digitizer pad that is removably coupled to one of said number of peripheral device interfaces such that it can be replaced with another type of manual input device.

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35 (Amended) A device according to claim *61* ~~33~~, further comprising a keyboard that is removably coupled to one of said number of peripheral device interfaces such that it can be replaced with another type of manual input device.

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36 (Amended) A device according to claim *61* ~~33~~, further comprising means for performing a character recognition task on an image obtained by said camera card for generating a set of recognized characters.

37. A device for personal communication and data collection and processing, comprising:

a small-sized, portable and hand-held work station;
a housing for said work station;
a data processing unit;
a display;
a user interface;
a number of peripheral device interfaces;
at least one memory unit;
a power source; and

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application software;
and further comprising:

a cellular mobile phone unit, coupled to said data processing unit, for transmitting image information processed by said data processing unit to another location; and

a camera card for obtaining image information, comprising:

optics integrated in said camera card for obtaining said image information;

at least one memory unit;

a processor unit for processing said image information;
and

an image sensor for obtaining said image information;

and wherein said camera card is at least partially inserted in the device.

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~~38.~~ (Amended) A device according to claim ⁶⁵~~37~~, further comprising a digitizer pad that is removably coupled to one of said number of peripheral device interfaces such that it can be replaced with another type of manual input device.

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~~39.~~ (Amended) A device according to claim ⁶⁵~~37~~, further comprising a keyboard that is removably coupled to one of said number of peripheral device interfaces such that it can be replaced with another type of manual input device.

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~~40.~~ (Amended) A device according to claim ⁶⁵~~37~~, further comprising means for performing a character recognition task on an image obtained by said camera card for generating a set of recognized characters.

41. A device for personal communication, data collection and data processing, which is a small-sized, portable and hand-held work station with a housing, comprising:

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a data processing unit;
a display;
a user interface;
a number of peripheral device interfaces;
at least one memory unit;
a power source; and
application software;

wherein the device also comprises:

means, coupled to said data processing unit, for transmitting image information processed by said data processing unit to another location using a radio frequency channel; and
a camera unit for obtaining image information, said camera unit comprising:

optics for obtaining image information;
an image sensor for obtaining image information, said image sensor being located within the housing of the device; and
a processor within said camera unit for processing obtained images, said processor being located within the housing of the device.

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~~42.~~ (Amended) A device according to claim ~~41~~⁶⁹, further comprising a digitizer pad that is removably coupled to one of said number of peripheral device interfaces such that it can be replaced with another type of manual input device.

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~~43.~~ (Amended) A device according to claim ~~41~~⁶⁹, further comprising a keyboard that is removably coupled to one of said number of peripheral device interfaces such that it can be replaced with another type of manual input device.

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~~44.~~ (Amended) A device according to claim ~~41~~⁶⁹, further comprising means for performing a character recognition task on an

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image obtained by said camera unit for generating a set of
recognized characters.

45. A portable cellular mobile phone comprising:
a built in camera unit for obtaining image information;
a user interface for enabling a user to input signals to
operate the camera unit;
a display for presenting image information obtained by the
camera unit;
a microprocessor adapted to control the operations of the
camera unit in response to input signals from the user
interface, and to process image information received by the
camera unit; and
means, coupled to said microprocessor, for transmitting image
information processed by said microprocessor to another
location using a radio frequency channel;
and wherein the camera unit comprises:
optics for obtaining image information;
an image sensor for obtaining image information; and
means for processing and for storing at least a portion of the
image information obtained by the camera unit for later recall
and processing.

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46. (Amended) A portable cellular mobile phone according to
claim ~~45~~⁷³, further comprising a number of peripheral device
interfaces, and a digitizer pad that is removably coupled to one of
said number of peripheral device interfaces such that it can be
replaced with another type of manual input device.

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47. (Amended) A portable cellular mobile phone according to
claim ~~45~~⁷³, further comprising a number of peripheral device
interfaces, and a keyboard that is removably coupled to one of said
number of peripheral device interfaces such that it can be replaced

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with another type of manual input device.

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48 ^{*73*} (Amended) A portable cellular mobile phone according to claim ~~45~~, further comprising means for performing a character recognition task on an image obtained by said camera unit for generating a set of recognized characters.

Cancel Claims 49 and 50.

Add the following claims:

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~~51~~. A device according to Claim 1, further comprising a replaceable keyboard coupled to one of said number of peripheral device interfaces of the device.

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~~52~~. A device according to claim 1, further comprising a digitizer pad adapted to couple to one of said number of peripheral device interfaces of the device.

11
~~53~~. A device according to claim 1, further comprising a replaceable keyboard and a digitizer pad adapted to couple to the device via a same physical and electrical interface.

12
~~54~~. A device according to claim 1, further comprising a manual user input interface adapted to be physically and electrically coupled to and decoupled from at least two types of user input device.

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~~55~~. A device according to claim ^{*12*}~~54~~, wherein a first type of user input device is comprised of a keyboard, and wherein a second type of user input device is comprises of a digitizer pad.

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~~56~~. A device according to claim ^{*12*}~~54~~, wherein said manual user

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input interface is rotatably attached to the housing of said device such that said user input device that is coupled to said device can be rotated.

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~~57.~~ A device according to claim ~~56~~, wherein said manual user input interface can be rotated to cover the display of said device.

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~~58.~~ A device according to claim 1, wherein said means for transmitting image information comprise means for facsimile transmission of at least a portion of said image information.

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~~59.~~ A device according to claim 1, wherein said means for transmitting image information comprise means for transmission of at least a portion of said image information as a Short Message Service message.

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~~60.~~ A device according to claim 1, wherein the camera unit is located entirely within the housing of the device.

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~~61.~~ A device according to claim 1, further comprising means for performing a character recognition task on at least a portion of said image information.

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~~62.~~ A device according to claim ~~61~~, wherein said means for performing a character recognition task comprises an application program stored in said at least one memory unit of the device.

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~~63.~~ A device according to claim ~~62~~, wherein said application program is a business card handling application.

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~~64.~~ A device according to claim 1, further comprising means for modifying at least a portion of said image information.

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~~65~~. A device according to claim ²²~~64~~, wherein said means for modifying at least a portion of said image information comprises a graphics handler application program.

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~~66~~. A device according to Claim ²~~4~~, wherein the cellular mobile phone unit comprises a telefax modem.

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~~67~~. A circuit card according to claim ²⁹~~14~~, wherein the circuit card has physical dimensions corresponding substantially with those of a standard PCMCIA card.

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~~68~~. A device according to claim ³⁰~~15~~, wherein said camera unit is integrated completely into said circuit card.

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~~69~~. A device according to claim ³²~~17~~, wherein the circuit card has physical dimensions corresponding substantially with those of a standard PCMCIA card.

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~~70~~. A portable notebook computer according to claim ³⁴~~19~~, wherein said camera unit is located entirely within the housing of the exportable notebook computer.

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~~71~~. A portable notebook computer according to claim ³⁶~~19~~, wherein said camera unit is integrated completely within said circuit card.

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~~72~~. A portable notebook computer according to claim ³⁶~~19~~, further comprising means for performing character recognition of characters appearing in an image recorded by said camera unit.

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~~73~~. A portable notebook computer according to claim ³⁶~~19~~, further comprising a digitizer pad that is removably coupled to said portable notebook computer via an electrical and mechanical

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interface such that it can be replaced with another type of manual input device.

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~~74~~. A portable notebook computer according to claim ³⁶~~19~~, further comprising a keyboard that is removably coupled to said portable notebook computer via an electrical and mechanical interface such that it can be replaced with another type of manual input device.

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~~75~~. A portable notebook computer according to claim ³⁶~~19~~, further comprising a removable keyboard and a digitizer pad that are both coupled to a same electrical and mechanical interface of the portable notebook computer.

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~~76~~. A portable notebook computer according to claim ³⁶~~19~~, further comprising an infrared link for data transmission between the portable notebook computer and an external device.

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~~77~~. A portable notebook computer according to claim ³⁸~~21~~, further comprising: means for selectively modifying an image appearing on said display.

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~~78~~. A portable notebook computer according to claim ⁴³~~26~~, wherein in the PCMCIA card has physical dimensions corresponding substantially with those of a standard PCMCIA card.

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~~79~~. A portable computer device according to claim ⁵⁵~~29~~, further comprising a manual user input interface adapted to be physically and electrically coupled to and decoupled from one of at least two types of user input device.

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~~80~~. A portable computer device according to claim ⁵⁹~~79~~, wherein a first type of user input device is comprised of a keyboard, and

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